Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Open Network Architecture Tariffs of Bell Operating Companies	)	CC Docket No. 92-91

DIRECT CASE

LAWRENCE E. SARJEANT
JAMES T. HANNON
ANNA LIM
1020 19th Street, N.W.
Suite 700
Washington, D.C. 20036
(202) 429-0303

ATTORNEYS FOR

U S WEST COMMUNICATIONS, INC.

May 18, 1992

TABLE OF CONTENTS

SUMMARY

In this Direct Case, U S WEST Communications, Inc. ("U S WEST") responds to issues which the Commission has designated for investigation into the lawfulness of U S WEST's Open Network Architecture ("ONA") rates. U S WEST's Direct Case demonstrates that both its rate development methodology and underlying assumptions are reasonable. As such, U S WEST urges the Commission to find U S WEST's ONA rates to be just and reasonable and to terminate its tariff investigation.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Open Network Architecture Tariffs of Bell Operating Companies	)	CC Docket No. 92-91

DIRECT CASE

U S WEST Communications, Inc. ("U S WEST"),[1] through counsel and pursuant to the Federal Communications Commission's ("Commission") Order Designating Issues for Investigation,[2] hereby files its Direct Case on its Open Network Architecture ("ONA") tariffs.[3]

I. DISCUSSION

In its Designation Order, the Commission designated seven issues for investigation in order to determine whether local exchange carrier ("LEC") ONA rates are just and reasonable. The Commission's inquiries were directed at examining model inputs and rate development methodologies rather than the

---

[1]U S WEST is a common carrier provider of exchange access and exchange telecommunications services.

[2]Order Designating Issues for Investigation, CC Docket No. 92-91, DA 92-483, rel. Apr. 16, 1992 ("Designation Order"). See also Public Notice, DA 92-570, rel. May 7, 1992, clarifying the pleading cycle.

[3]U S WEST's ONA tariffs were contained in Transmittal No. 206 and filed with the Commission on November 1, 1991. The Commission suspended Transmittal No. 206 for one day and U S WEST's ONA rates became effective on February 2, 1992, subject to an accounting order. See U S WEST Communications, Inc. Revisions to Tariff F.C.C. No. 1, Open Network Architecture Tariffs, 7 FCC Rcd. 1512, 1513 ¶ 4 (1992).

validity of cost models.[4] As U S WEST demonstrates in the following responses, its ONA rates are just and reasonable and were developed using reasonable methods.

Question 1

Is the development of unit investment for BSEs on the basis of the (short run) marginal investment option of SCIS and SCM a reasonable method that is consistent with the Commission's ONA requirements and policies?

Response

Not applicable.[5]

Question 2

Have carriers selected model offices that are representative of offices that will be used to provide BSEs?

Response

In general, U S WEST has included all analog and digital host and remote end offices (as detailed in Appendix A) to develop the SCM studies or corresponding SCIS model offices used in the determination of investments for the various BSEs.[6] Office types included in SCIS were determined based upon the technology forecasted two years from the date of the study. SCM studies use only forward-looking digital investment with all

---

[4]The Commission is examining LEC cost models in a separate but closely related proceeding. See Commission Requirements for Cost Support Material To Be Filed with Open Network Architecture Access Tariffs, 7 FCC Rcd. 1526 (1992) ("SCIS Disclosure Order").

[5]The Commission directed BellSouth Telephone Companies and Southwestern Bell Telephone Company to respond to this question. See Designation Order at ¶ 3.

[6]For two features, Make Busy and Message Delivery, only the Central Region (i.e., formerly Mountain Bell) offices were used to represent U S WEST.

analog switches assumed to be replaced by digital switches.

The SCM studies and the SCIS model offices are weighted averages of all office investments for each particular switch type. No statistical sampling was used for either the SCM or the SCIS cost studies.

The Commission also raised questions on the switch capacity assumptions used to determine switch replacement. The majority of U S WEST's switches do not exhaust but are replaced for technological reasons when the given switch is unable to provide features demanded by the marketplace and in cases of economic obsolescence.[7] However, the major switch components which would contribute to an office being a candidate for replacement due to capacity exhaustion are processor, lines, and numbers. Engineering criteria for capacity varies with each component. For example, a switch with a processor approaching 85% of capacity would be a candidate for replacement.

Question 3

Is use of a cost of money that exceeds 11.25 percent reasonable?

Response

U S WEST uses a cost of money in calculating the direct costs of providing a new service which deviates from the "authorized rate of return." Currently, it exceeds 11.25%.[8]

---

[7]Even in cases where only a portion of a switch's capacity is being utilized, it often costs less to replace an older generation switch than add capacity and/or functionality.

[8]U S WEST reevaluates its cost of money for new product and investment purposes on a quarterly basis.

Indeed, it would be pure chance if U S WEST's cost of money was equal to the authorized rate of return at any given point in time. The authorized rate of return of 11.25%, which was used to establish initial price cap rates, was determined at a given point in time using the embedded cost of debt, an industry-wide estimated cost of equity and an adjusted industry-wide capital structure. Clearly, it may not be at all representative of the cost of money which U S WEST or any other LEC faces when it is considering whether to introduce new services or make additional infrastructure investments. The cost of money used for such purposes must be forward-looking -- it reflects U S WEST's best estimate of what it will cost to fund new investments. To ignore the cost of money and use the "authorized rate of return" in evaluating new investments is to ignore reality.[9] Clearly, a carrier may choose not to introduce a new service if it determines that the new service will not generate revenues sufficient to cover investment costs, including the cost of money. The decision to invest is governed by the prospective cost of money, not the "authorized rate of return." U S WEST's use of a prospective cost of money in calculating direct costs of new services is not unreasonable and will not produce excessive

---

[9]For example, the Commission's authorized rate of return of 11.25% was calculated using an embedded cost of debt that included a significant amount of debt with coupon rates of less than 6%. Needless to say, U S WEST does not anticipate being able to sell long-term debentures at rates of 6% or less at anytime in the foreseeable future. As such, it would be unwise to use the embedded cost of debt to estimate the future cost of debt.

rates.

The impact of using a prospective cost of money in calculating the direct costs of BSEs rather than using 11.25% is de minimis. This is because the cost of money was not used to calculate overhead loadings, only direct costs. The percentage overhead loadings which were applied to direct costs are the same loadings that U S WEST uses for all new "local switching" services. These overhead loadings embody the 11.25% "authorized rate of return" that was used to establish initial price cap rates. U S WEST has also performed a sensitivity analysis on ANI using one switch type to determine the impact of changing the cost of money on its BSE direct costs. This analysis found that a 100 basis point change in the cost of money results in a 2% change in direct costs. Clearly, the use of a cost of money which exceeds 11.25% will not produce excessive BSE rates.

Question 4

Should 1ESS and/or 1AESS switch costs be included in the development of BSE rates?

Response

U S WEST does not believe that it is inappropriate to use 1AESS costs in establishing BSE rates. U S WEST has employed 1AESS costs, to a very limited degree, in developing its BSE rates even though all future switch replacements are assumed to be 100% digital technology. U S WEST used 1AESS costs in those cases where a particular BSE was only available from 1AESS offices at the time of the study or where particular cost studies were not updated prior to the filing of ONA tariffs. This

information is contained in Appendix B. If 1AESS technology had been excluded, U S WEST would not have had a basis for conducting cost studies for particular BSEs (i.e., BCLID and DID Trunk Queueing).

Appendix B also contains BSE rates which have been revised to exclude 1AESS technology. Cost support for these revised BSE rates is contained in Appendix C. As Appendix B demonstrates, the exclusion of 1AESS technology from cost studies does not necessarily result in lower BSE rates. Some BSE prices increase while others decrease when it is assumed that switching technology is 100% digital. This is because features and functions are not deployed in the same manner under different switching technologies. Also, switch vendors use different equipment and software to provide the various features and functions. The net result is that some BSE prices increase while others decrease when 1AESS costs are excluded.

The Commission also directed carriers to demonstrate how embedded switch technology assumptions promote the Commission's four ONA goals.[10] U S WEST is somewhat perplexed by this directive since U S WEST's assumptions were largely selected

---

[10]"Specifically, those carriers should explain (i) how BOC flexibility to price efficiently is furthered by the assumption of embedded switch technology; (ii) how BOC incentives to innovate are fostered by reliance on the embedded technology assumption; (iii) how reliance on embedded technology costs fosters the Commission's stated goal that BOCs not set rates excessively high; and (iv) how reliance on embedded technology furthers the goal that BOCs not engage in unreasonably discriminatory pricing." See Designation Order at ¶ 3 (4) (citing Part 69/ONA Order, 6 FCC Rcd. at 4531 ¶ 38 (infra n.13)).

on the basis of long-range network plans and reasonability, rather than the Commission's ONA goals. However, U S WEST will attempt to address each of the Commission's four goals. First, U S WEST believes that the limited use of 1AESS technology in cost studies has allowed U S WEST to price efficiently by giving it a realistic cost benchmark from which to establish BSE prices. Second, U S WEST does not believe that the limited use of 1AESS technology has any impact on "BOC incentives to innovate." Third, as stated above, the use of 1AESS technology gives U S WEST a realistic cost benchmark which ensures that its BSE rates were not set "excessively high." Fourth, U S WEST's limited use of 1AESS technology in cost studies also provides assurance that U S WEST's BSE rates are cost-based, thereby minimizing any possibility of unreasonable price discrimination.

Question 5

Are the BellSouth and U S WEST overhead loadings excessive?

Response

U S WEST does not believe that its overhead loadings are excessive. U S WEST can only surmise from Attachment A in the Commission's Designation Order that BellSouth and U S WEST used significantly different methodologies for calculating overhead loadings and, possibly, for calculating direct costs than other Bell Operating Companies ("BOC"). U S WEST has no knowledge of the methodologies that other BOCs used to calculate overhead loadings or direct costs. As such, U S WEST will not attempt to explain the differences in overhead loadings among

BOCs. The fact that U S WEST's overhead loadings differ significantly from other BOCs does not imply that they are unreasonable. U S WEST notes that despite having relatively high overhead loadings in percentage terms, its overall prices for ONA services are quite reasonable.[11] If anything, this is an indication that different pricing methodologies were used rather than that U S WEST has excessive overhead loadings. In order to assure the Commission that its overhead loadings are reasonable, U S WEST will attempt to more fully explain the derivation of these loadings.[12]

U S WEST's methodology for assigning overhead loadings to BSEs is in full compliance with the Commission's Part 69/ONA Order[13] and has been employed to assign overhead loadings to U S WEST's new service offerings. U S WEST's overhead loading methodology uses the relationship between overhead costs and direct costs for a given Part 69 cost category (i.e., for ONA services in Transmittal No. 206 the local switching category was used) to determine the overhead loading for a given category of services. This ensures that no service bears a greater share of

---

[11]For example, the price range among the BOCs for ANI is from $.000094 to $.002412, with U S WEST's rate of $.000241 falling in the low end of this range.

[12]A more detailed explanation of the derivation of U S WEST's overhead loadings is contained in Appendix D.

[13]See Amendments of Part 69 of the Commission's Rules Relating to the Creation of Access Charge Subelements for Open Network Architecture, CC Docket No. 89-79, Policy and Rules Concerning Rates for Dominant Carriers, CC Docket No. 87-313, 6 FCC Rcd. 4524, 4531 ¶ 44 (1991) ("Part 69/ONA Order").

overhead loadings than the respective Part 69 cost category as a whole.[14] U S WEST's overhead loading factor (or fully distributed cost ("FDC") factor) is calculated by dividing the revenue requirement for a given Part 69 cost category by direct costs for the category.[15] This overhead loading factor was applied to direct costs for U S WEST's BSEs to produce BSE prices with uniform overhead loadings.

Clearly, overhead loading factors could be calculated for different levels of aggregation (i.e., other than by Part 69 cost category). While there is no one correct method, U S WEST believes that Part 69 cost categories are the most appropriate level of aggregation for use in its tariff filings. The Commission has not found U S WEST's overhead loading methodology to be unreasonable in the past and should not do so in this proceeding.

---

[14]U S WEST believes that this complies with the Commission's directives on the application of overhead loadings to direct cost. See id. at ¶¶ 42, 44.

[15]The revenue requirement used in U S WEST's ONA tariffs was calculated from 1990 expense, investment, tax expense and FIT adjustment data contained in ARMIS Report 43-01 (Automated Reporting Requirements for Certain Class A and Tier 1 Telephone Companies (Parts 31, 43, 67, and 69 of the FCC's Rules), CC Docket No. 86-182) and the previously authorized 11.25% rate of return which was used to establish U S WEST's rates under price cap regulation. Annual direct cost for each Part 69 cost category, the denominator in the above calculation, was derived by multiplying service demand by direct costs for each service. Direct cost for each service within a Part 69/ONA category was determined using engineering studies, time and wage studies and other cost accounting studies in accordance with Commission requirements. See id. at ¶ 42.

Question 6

Have carriers adequately justified their use of nonuniform overhead loadings in pricing BSEs?

Response

Despite the appearances of nonuniform overhead loadings in Attachment A of the Commission's Designation Order, U S WEST used uniform loadings in calculating its BSE rates. The perverse results in Attachment A are largely the result of very small numbers and rounding. In deriving prices for its BSEs, U S WEST multiplied the monthly equivalent of direct costs for a given service element by the fully distributed cost factor for local switching (i.e., Part 69 cost category).[16] The 1991 FDC factor for local switching was 2.38.

While one would expect that uniform application of this methodology would result in uniform ratios of 138% for all U S WEST BSEs in Attachment A, this was not the case. The variance in the overhead loading/direct cost ratios in Attachment A is due to the following facts: U S WEST prices "per line" BSEs in even cents (i.e., rounding up or down to the closest cent); BSE prices are very small, literally pennies per month; and direct costs for a BSE are calculated on an annual basis and monthly costs are derived and rounded to the nearest cent. The combined impact of these three factors can be best seen by taking the two extremes in Attachment A, DID Trunk Queueing and Three-Way Call Transfer, and showing U S WEST's calculations with and

[16]See U S WEST's response to Question 5, above, for a more detailed explanation of how this factor was derived.

without rounding.

DID Trunk Queueing

Row		Rounded	Without Rounding
A.	Direct Costs (Annual)	$ .22	$ .22
B.	Direct Costs (Monthly) (Row A/12)	.02	.01833
C.	Monthly Price (2.38 * Row B)	.05	.043625
D.	Direct + Indirect Costs (Annual) (12 * Row C)	.60	.5235
E.	Overhead Costs (Annual) (Row D - Row A)	.38	.3035
F.	Overhead/Direct Costs (Row E/Row A)	1.7273	1.38

Three-Way Call Transfer

Row		Rounded	Without Rounding
A.	Direct Costs (Annual)	$1.13	$1.13
B.	Direct Costs (Monthly) (Row A/12)	.09	.094167
C.	Monthly Price (2.38 * Row B)	.21	.22412
D.	Direct + Indirect Costs (Annual) (12 * Row C)	2.52	2.6894
E.	Overhead Costs (Annual) (Row D - Row A)	1.39	1.5594
F.	Overhead/Direct Costs (Row E/Row A)	1.2301	1.38

As the above calculations demonstrate, U S WEST applied uniform overhead loading in deriving BSE prices. The deviations which the Commission has observed in Attachment A, while large percentage-wise, are miniscule in real terms, particularly in light of the fact that these BSE prices are on a per-line, per-month basis.

Question 7

Are differences between BSE rates and unit costs

differences justified?

Response

There are no differences between U S WEST's BSE rates and unit costs.

II. CONCLUSION

As the foregoing demonstrates, U S WEST's model inputs and rate development methodologies are not unreasonable. As such, the Commission should find that U S WEST's ONA rates are just and reasonable and terminate its investigation.

Respectfully submitted,

U S WEST Communications, Inc.

By: James T. Hannon /LEJ

Lawrence E. Sarjeant
James T. Hannon
Anna Lim
1020 19th Street, N.W.
Suite 700
Washington, D.C. 20036
(202) 429-0303

Its Attorneys

May 18, 1992

APPENDIX A

CENTRAL OFFICES REPRESENTED IN COST ANALYSIS OF BSES

BSE	Central Offices
Alternate Traffic Routing	No recurring switching costs are applicable to this service.
Answer Supervision Line Side	All DMS100 and DMS10 end offices.
ANI	All #5AESS, DMS100 and DMS10 end offices.
Call Forwarding Variable	All #5ESS, DMS100 and DMS10 end offices.
Call Transfer	All #5ESS, DMS100 and DMS10 end offices.
Called Directory Number Delivery	All #5ESS, DMS100 and DMS10 end offices.
BCLID	All #1AESS end offices. At the time of the study this service was only offered on #1AESS.
ICLID	All #5ESS and DMS100 end offices.
DID Trunk Queueing	All #1AESS end offices. This service is only offered on #1AESS.
Hunt Group Arrangement	All #5ESS, DMS100 and DMS10 end offices.

BSE	Central Offices
Make Busy	All #5ESS end offices in the central region, formerly Mountain Bell, were used. The offices were assumed to represent all #5ESS end offices in U S WEST.
Message Delivery Service	All #1AESS and #5ESS end offices in the central region, formerly Mountain Bell, were used. These offices were assumed to represent all #1AESS and #5ESS offices in U S WEST.
UCD & Queueing for UCD	All #1AESS and #5ESS end offices.
Three Way Calling	All #5ESS, DMS100, and DMS10 end offices.
Traffic Data Report Service	No recurring switching costs are applicable to this service.

APPENDIX B

COST/RATE IMPACTS OF EXCLUDING 1AESS TECHNOLOGY

TECHNOLOGY MIX:

Message Delivery Service:

The recurring costs for Message Delivery Service were based on a technology mix of 69% 1AESS and 31% 5ESS. The costs excluding 1AESS would assume 100% 5ESS technology.

Uniform Call Distribution and Queueing for UCD:

The recurring costs for UCD and Queueing for UCD were based on a technology mix of 68% 1AESS and 32% 5ESS. The costs excluding 1AESS would assume 100% 5ESS technology.

Caller Identification - Bulk (BCLID):

At the time of the study BCLID was only available on 1AESS. If 1AESS technology was excluded, there would be no basis on which to perform a cost study.

DID Trunk Queueing:

This service is only available in 1AESS central offices. If 1AESS technology were excluded, there would be no basis on which to perform a cost study.

RATES REVISED TO EXCLUDE 1AESS TECHNOLOGY:

BSE	Revised Rate
Message Delivery Service	
- MDS Arrangement	$ 291.67
- Call Data per line	$ 0.00
Uniform Call Distribution	
- Per Line	$ 8.64
Queueing For Use With Uniform Call Distribution	
- Per queue slot in a group	$ 31.89
- Delayed Announcement - Standardized Announcement Per Announcement	$ 7.71
- Delayed Announcement - Standardized Announcement Per queue slot in a group	$ 0.00

APPENDIX C

RECURRING COST

Message Delivery Service

- MDS Arrangement per I/O Central Office Facility

A.	Total Unit Investment	$6,620.14
B.	Capital Related Costs	
	Depreciation	$ 409.39
	Cost of Money	$ 389.52
	Income Tax	$ 165.99
C.	Operating Expenses	
	Maintenance	$ 308.10
	Ad Valorem Taxes	$ 92.02
	Administrative Expenses	$ 94.32
	Business Fees	$ 11.24
D.	Total Annual Direct Unit Cost (B + C)	$1,470.58
E.	Total Monthly Direct Unit Cost (D/12)	$ 122.55

RECURRING COST

Message Delivery Service

- Call Data

A.	Total Unit Investment	$	0.00
B.	Capital Related Costs		
	Depreciation	$	0.00
	Cost of Money	$	0.00
	Income Tax	$	0.00
C.	Operating Expenses		
	Maintenance	$	0.00
	Ad Valorem Taxes	$	0.00
	Administrative Expenses	$	0.00
	Business Fees	$	0.00
D.	Total Annual Direct Unit Cost (B + C)	$	0.00
E.	Total Monthly Direct Unit Cost (D/12)	$	0.00

RECURRING COST

Uniform Call Distribution

- Per Line

A.	Total Unit Investment	$ 196.00
B.	Capital Related Costs	
	Depreciation	$ 12.12
	Cost of Money	$ 11.53
	Income Tax	$ 4.91
C.	Operating Expenses	
	Maintenance	$ 9.12
	Ad Valorem Taxes	$ 2.72
	Administrative Expenses	$ 2.79
	Business Fees	$ 0.33
D.	Total Annual Direct Unit Cost (B + C)	$ 43.52
E.	Total Monthly Direct Unit Cost (D/12)	$ 3.63